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ABSTRACT

Models for preparing teachers to work knowledgeably and effectively with diverse populations are needed. The primary purpose of the Learning to Teach Diverse Populations project (Houston, Texas) is to reduce the drop-out rate of new teachers assigned to inner-city schools by training student teachers in a supportive inner-city school environment. The primary goals of the professional development school (PDS) site for this project are to develop teachers who: (1) choose to teach in inner-city schools; (2) are effective teachers in inner-city schools; (3) are self analytical; and (4) share decision making and responsibility for carrying out the goals of the program. In addition to a description of the PDS design and implementation (including on-site triad seminars for student teachers, supervising teachers, and college supervisors), results are presented from experimental, evaluative studies of student teachers (N=44) and supervising classroom teachers (N=32). A primary goal of the experiment was to see how classroom teachers and student teachers change their classroom behavior during a semester at the PDS. In addition, those student teachers who had completed their preparation at the PDS were interviewed during their first year of teaching in an effort to evaluate the effects of the PDS experience. Findings indicate that groups of students can be prepared to teach successfully in inner-city schools when certain conditions are present. (IAH)

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CONNECTING PRESERVICE TEACHER EDUCATION AND INSERVICE PROFESSIONAL DEVELOPMENT: A PROFESSIONAL DEVELOPMENT SCHOOL

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Connecting Preservice Teacher Education and Inservice Professional Development: A Professional Development School

The need for excellent teachers to teach disadvantaged inner city children is well documented. Too often new teachers have received their field experience in the suburbs but are hired to teach in multi-cultural inner-city schools with little preparation to serve this population of children and families. The drop out rate of new teachers assigned to inner-city schools is double that of other teachers (approximately 40 percent in Houston Independent School District). Teachers with seniority prefer to teach in the "better" schools, leaving the new teachers to teach in the least desirable schools, with the children no one wants, in the least equipped schools and classrooms.

A primary purpose of this project Learning to Teach Diverse Populations, is to change this history of failure of first year teachers to one of success by training student teachers in a supportive inner-city school environment. The primary goals of this Professional Development School (PDS) are to develop teachers who 1) choose to teach in inner-city schools 2) are effective teachers in inner-city schools, and 3) are self analytical, and share in the decision making and responsibility for carrying out the goals of the program. Goals for children in the school include active participation in their own education. The long range goal is to improve the instruction of teachers and student teachers so that inner-city students will prosper academically.

PROGRAM OVERVIEW AND DESCRIPTION

Background, Foundation, and Theoretical Framework

The research literature reporting findings from experiments with models of preparing and supervising student teachers is very sparse. However, a number of studies indicate that student teaching experiences are often reported to have more impact than other education courses, but even the student teaching experience is too often reported as insufficient. One area of concern is that student teachers often do not receive adequate feedback or supervision during their field experience (Cronin, 1983; Sykes, 1983; Waxman and Ealberg, 1986), McIntyre and Killian (1986) report that cooperating teachers in their study gave very little feedback to student teachers. Tom (1972) found a lack of continuity between supervisory visits. Zeicher and Liston (1987) found that supervisors often failed to provide opportunities for reflective analysis, even in a program purporting to emphasize reflective thinking. Kennedy (1987) discusses deliberate actions as a loop combining analysis with action. In developing the concept of deliberate action, Kennedy draws upon the work on Schon (1987) and the role of the critical mentor in fostering reflective thinking. The PDS was organized and designed to promote shared decision making, reflectivity, and self analysis among all of its participants.

Collaborative Decision Making Councils: How the Program Operates

The organization and management plan of this PDS is illustrated in Figure 1. Because of the complexity of the organization at the school district and university, it is necessary to have clear communication channels at all levels for decisions regarding the PDS to be shared. At the inception of the program in winter 1987, administrative leaders from the school district and the College of Education met at the district office and formed the PDS Council. Participants in this group are shown in Figure 1. This council established policy for the PDS: for example, this council sought and received school board approval to close a school and create the professional development school for teachers. This council decided upon qualifications for the principal and the teachers to teach at the PDS, the stipend for teachers, the number of courses PDS teachers could take at COE each year, program evaluation, and details of the budget. This council met more frequently at the beginning of the school year to establish or adjust policy and at the end of the school year to examine the program evaluation and make changes for the following year.

The PDS Advisory Council, at the school site, includes the principal, the PDS coordinator, the COE Coordinator, and Director. This council meets each week prior to the collaborative seminars. These meetings are frank and open discussions of issues and problems such as the match or mismatch of student teachers and teachers, managing the number of visitors and observers in the school modifying the program based on summative and formative evaluations, and determining what COE courses needed by teachers at the school site for certification in special areas.

The COE Advisory Council includes faculty who teach courses at the PDS and those involved in the placement or supervision of student teachers there. The PDS principal and coordinator also meet with this group on a monthly basis. Questions regarding the courses needed at the PDS and the faculty available to teach are discussed. In one case, a PDS teacher was hired by the COE as a lecturer to teach a computer course at the PDS. Math methods student tutors have been successfully located at the PDS, and teachers are requesting that reading/language arts methods tutors be located at the PDS. Such requests require extensive discussion and sometimes reorganization of programs by the COE faculty.

The PDS Faculty Advisory Council is composed of the principal, the PDS Coordinator, the COE coordinator and a teacher representative from each grade level. The teacher representatives rotate during the year so that every teacher has the opportunity to serve on the council. Meetings occur on the second and fourth Monday of each month. Teachers ask questions, raise issues, and make recommendations regarding the PDS.

The day to day work of the PDS is carried out collaboratively by the school site PDS Coordinator and the COE Coordinator. The PDS Coordinator, a new full time position created by ISD, is responsible for coordinating the flow of visitors, observers, tutors, and student teachers at the

school. She is also responsible for scheduling PDS meetings, college courses, and enrolling teachers in the courses. The COE coordinator spends half of her time at the school site structuring the weekly seminars, providing materials for the seminars, teaching a course on supervising student teachers, and collecting formative evaluation data. She works with the PDS coordinator to match student teachers with teachers. When difficulties arise, they work together with student teachers and supervising teachers to resolve problems.

The PDS School Site

The PDS is a pre-kindergarten through eighth grade school located one mile from the center of Houston. This school was chosen for the diversity of its population and program. The elementary section of the school, grades Pre-K through fifth grade are students from an attendance zone which encompasses the immediate neighborhood. This school population is 60% Black, 35% Hispanic, 1% White and 3% Asian. In the elementary section of the school, 99% of the children in the elementary school are on the free lunch program. The school also serves middle school grades 6,7 and 8. This attendance zone expands to all of the downtown Houston area, and students are also served from higher income areas who are voluntarily bussed to the school for a middle school Fine Arts Program. At the middle school level, the student population is 36% Black, 38% Hispanic, 5% Asian and 21% White. Fifty three percent of these families qualify for the free lunch program. The school's funded programs include Chapter 1 for elementary eligible students. The school administration includes a principal, three assistant principals, a magnet coordinator, a Chapter 1 coordinator, three guidance counselors, and a dean of instruction. There are 28 elementary teachers and 30 secondary teachers. The school district was very eager to find an avenue which would lead to improved instruction for at-risk inner-city children.

The COE's Teacher Education Program

Typical of most student teaching programs, the students have been allowed to select the school district in which they wish to do their student teaching. Their first choices are most often made according to 1) proximity to their homes, and 2) school districts reputed to have good working conditions, and/or higher salaries. Following this custom for placement of student teachers resulted in a scattering of students to 52 locations. College supervisors often spent more time on the road than actually supervising students (e.g. 60 minutes getting there; 50 minutes observing; 30 minutes giving feedback; 60 minutes going home). The result has been inadequate, costly supervision with students sometimes placed with teachers who were not good models. The college supervisors were often recruited at the last moment, and they were not given supervision training. Consequently, the "capstone" experience of teacher preparation had little consistency with the COE's reflective inquiry philosophy.

The PDS Organization and Management Plan

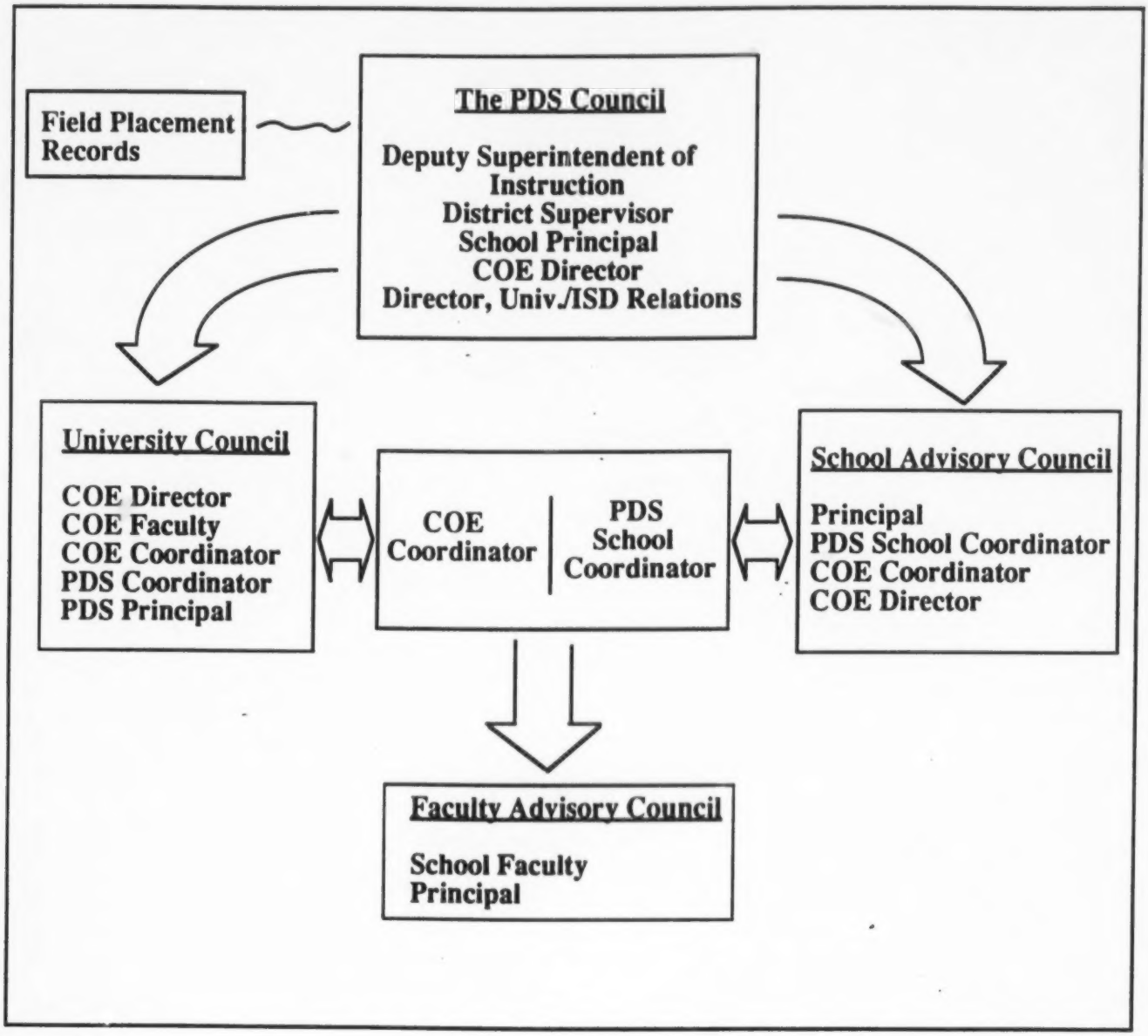

Figure 1

The primary purpose for the university's involvement in the academy school was to develop a school site close to the university where ten or more student teachers could be placed each semester so that well planned, consistent supervision could be provided. An inner-city multi-cultural school was desirable since many of our students eventually teach in these schools. An additional purpose of the PDS for the university was to collaborate in providing seminars on site which would be consistent with the COE's philosophy. The college supervisors, supervising teachers, and student teachers attend the seminars. This process facilitates coordination and purpose between the school and the university.

Responsibilities

The separate responsibility for the development of the PDS program resides in the school district and the college. The school districts responsibilities include the following:

The selection of one school site to serve as the professional development and demonstration School.

The selection of a principal committed to the school/college partnership and managing a highly visible demonstration school.

The selection of a school faculty dedicated to the goals of the PDS, willing to work with student teachers and tutors, and willing to collaborate in planning and delivering the weekly seminars.

The allocation of funds for an Academy School coordinator salary.

The allocation of funds for teacher incentives (career ladder credit, college credit, a stipend).

The allocation of space for the Academy School Coordinator, the COE Coordinator, a room for seminars, classes, and materials.

The school district's evaluation department willingness to collaborate with the COE PDS Director in the evaluation of the PDS.

The college responsibilities include the following:

The field placement office committed to assigning 10 to 12 student teachers to the PDS each semester.

The assignment of one faculty member committed to be the PDS Director.

The assignment of one on-site COE PDS coordinator to collaborate with the PDS teachers in planning and teaching the weekly seminars at the school site.

The assignment of college courses to be taught on the PDS site including math methods and reading methods, English as second language, instructional technology for the classroom, and early childhood. Faculty are also needed to teach classes at the school for parents seeking the Graduate Exams for Diploma (GED) or amnesty.

The allocation of evaluation funds or course credit for doctoral students to assist in the evaluation.

The allocation of funds for doctoral students, and/or faculty trained to collect observation data.

Compared to short term staff development programs, the costs of this program for the school district may appear expensive, but the investment is worthwhile if the outcome is better prepared teachers for the at-risk student population. The costs have been primarily for the teachers' extra pay stipend, the PDS coordinator salary, and the teachers' tuition for college courses. Expense for the COE has been minimal since most courses were reorganized and moved to the school site. Student teacher supervisors were paid as usual. Faculty seminar leaders were given one course load credit since most teachers took the seminar for graduate credit. The COE coordinator was also a supervisor and a seminar leader; thus, there were no added costs. A research assistant doctoral student was needed to supervise data collection and data entry. Two IBM compatible laptop computers and the observation software were needed by the school district and the COE.

Program Implementation

Program implementation occurred in three phases. Phase I was organizational. Meetings were held with the principal and faculty of the potential school. Approximately 50% of the faculty wanted to be involved in the PDS. Teachers who did not want to stay in the highly visible school were given first chance at openings in other schools. At the end of Phase I, the principal was promoted to a high school principalship which matched his administrative training and interests. A principal committed to site-based management was hired.

Recruitment

Meanwhile, the COE was organizing to recruit student teachers to be placed in the PDS. Many students were reluctant to go to the inner-city school because of the high crime and drug-ridden

neighborhood. Finally 11 students volunteered for the first semester. Faculty willing to teach school site courses and help organize the seminars as well as an elementary and secondary supervisor for the student teachers were identified.

Bridging the Gap

The beginning of Phase II revolved around organizing and presenting the weekly triad seminars. The purpose of the weekly seminar is to breach the gap in communication most often existing between college supervisors, supervising teachers, and student teachers. Seldom are the goals and curricula of the college and the goals and curricula of the schools coordinated, and the student teacher is in the difficult position of trying to serve two masters. The seminars promoted consistency in supervision by focusing all participants on specific problem areas and effective instructional strategies illuminated in research on teaching.

During the first year of program implementation, the COE faculty provided the seminar outlines and materials. The second year teachers taught the seminars. Then and now, teachers, student teachers, and college supervisors attend each week two hour after school seminars. The seminars are interactive and stimulate reflection. The seminars focus on working with the neighborhood children and their families, managing classrooms, using positive behavior management, planning appropriate lessons, observing and evaluating each other. Each seminar begins by participants sharing new ideas they had tried during the previous week. Student teachers and teachers identify problems they encountered and discuss possible solutions. Each week student teacher and supervising teacher panels discuss mutual concerns. Examples of activities that occurred through the seminars included assessing children's learning levels, conferring with parents, observing peers, preparing lessons using the children's background experience, preparing lessons with higher order questions and higher cognitive activities, participating in cooperative group activities. Meetings end with a written commitment to try something new in their classroom the next day. This is followed by "Pluses" (something they liked about the session) and "Wishes" (something they would like to be different the next time).

This is formative feedback shapes the following seminars. The seminar materials for teachers and student teachers include a binder of *Effective Use of Time* and *Learning to Teach Diverse Population* program materials. Depending on the problems raised in the weekly seminars, other current materials are added. Several teachers have written components for working with community parents, and district requirements for keeping grade books.

Another essential component of the seminars is observation of student teachers and supervising teachers at the beginning and end of each semester. Participants are taught to analyze their own observation profiles of behavior, and they set goals for behavior change. (The basis for the

profiles is explained in the evaluation section.) At the end of the semester they compare their beginning and ending profiles, assess their change in behavior, and set new goals.

In the second semester of Phase II, a math methods class was moved to the PDS. The COE faculty teaching methods class collaborated with the classroom teachers to adapt instructional strategies which complement the school district curriculum and the state required essential elements. The 28 college students served as tutors in the classrooms under the teachers' supervision.

In Phase III of the program, ten PDS teachers took two three-week intensive summer graduate courses in which they learned to teach the seminars and conduct the laptop computer evaluation observations. In the beginning of the third year, these teachers collected the student teacher and supervising teachers' observation data and taught the seminars collaboratively with COE faculty. One teacher has been hired to teach computer college courses, and another is being sought for an adjunct position.

Teacher responses, recorded during weekly evaluation of the seminars, indicated a unanimous feeling that having a student teacher has made them feel more professional and has required them to examine their instructional practices on a daily basis. Receiving the profiles of their own instructional behavior was also reported to be helpful in setting specific goals for improvement. Even the best teachers found they had improved on such variables as asking higher order-questions and providing more guided corrective feedback to students.

Student teacher responses have also been favorable. During a 1989 Spring reunion, comments of former PDS student teachers were recorded by the ethnographer. Most frequently heard were comments such as, "I love teaching! I can do it!" "I'm so lucky to have had my training at the PDS. I'm no longer shocked at where these kids come from, what they say, and how they live." "Helping the kids, who can't speak English, to understand what we are doing and how they can succeed makes me feel good."

During a bitter winter, the PDS became a shelter school for neighborhood children who needed a warm dinner, help with home work, a shower, and a sleeping cot if they chose. This shelter was staffed by some paid school personnel and many volunteers. The school is also responding to parent needs. On a continuing basis, night courses are now offered for parents to earn their Graduate Equivalent Diploma and to gain English speaking skills. Baby-sitting service is provided.

EVALUATION DESIGN AND METHODS OF ANALYSIS

Both formative and summative evaluations were a part of the program design each semester. The following evaluation questions were asked of data collected in Fall 1987, Spring 1938, Fall 1988, and Spring 1989, Fall 1989, Spring 1990:

1) During the student teaching semester, do Experimental Student Teachers (ESTs) improve their classroom organizing skills, their interactive instructional strategies and their behavior management skills more than do Control Student Teachers (CSTs)?

2) Do supervising teachers improve their instructional strategies and behavior management during the semester?

3) Is a modeling effect observed between the supervising teachers and their student teachers' instructional behavior?

4) Does the academy school prepare the ESTs so that they are more likely to choose to teach in an inner-city school than are CSTs?

5) According to principals' reports, do EST's rate higher in their first year of teaching when compared to other first year teachers?

6) Do supervising teachers grow professionally and choose to remain at the PDS?

7) Is the behavior and the academic performance of the children at the PDS positively or negatively effected by so many student teachers and tutors?

Sample

The sample included 44 Experimental Student Teachers (ESTs). Twenty ESTs had baccalaureates in subjects other than education and returned to complete courses required for certification. Ages ranged from 21 to 59.

The 25 Control Student Teachers (CSTs) were selected from those who volunteered to be observed as a part of the study and matched for grade level and subject area. Since student teachers are not typically assigned to inner-city schools, all but three CSTs were placed in suburban schools. Ages of CSTs ranged from 22 to 40.

The supervising teachers ranged in age from 25 to 61. Their experience in years of teaching range from 3 to 41 years. Seven had student teachers at other times during their teaching careers. Twelve of the 32 teachers had student teachers for two or more semesters.

Instruments and Procedures

The instruments included objective observations, questionnaires, interviews, journals and ethnographic records. An ethnographer was employed and was on site one day each week during each semester.

Stallings Observation Instrument

Since a primary goal of the experiment was to see how classroom teachers and student teachers change their classroom behavior during the semester, it was necessary to observe how time was used in the classroom at the beginning and end of the semester.

To measure classroom behavior change, the Stallings Observation Instrument (SOI) was used. The SOI was developed for evaluating the implementation of Head Start and Follow-Through models in the 1970's at Stanford Research Institute (Stallings and Kaskowitz, 1974). The validity and reliability of the SOI was reported in Stallings and Geison (1977). In 1978, through a Federal School Improvement Grant, the SOI was modified and validated for use in evaluating secondary classrooms. The SOI provides a sample of how teachers and students spend their classroom time. In addition, forty interaction variables were summarized in three major factors: classroom organization, interactive instruction, and student behavior management. The factors are made up of such variables as the percent of organizing statements, instructional statements, three levels of questions, praise/support, and three types of correction.

In 1987, software was developed so that classroom observations could be recorded on a laptop computer rather than on an optically scanned paper form. The observation software was designed to prohibit errors in data entry (i.e., there are built-in error traps for all the common observer entry errors). This innovation has vastly improved accuracy and speeded up data retrieval.

Observers used in the study reported here were selected from a pool of fifty applicants responding to an advertisement placed in the Houston Chronicle. Of the seven used to collect data in this study, four were substitute school teachers and three were doctoral students. Observers were trained to use the SOI in a seven-day training session. To be hired as qualified observers, they must pass a written test of procedures, accurately code a written vignette, and code a criterion video tape. They must also complete an inter-rater agreement observation in a classroom. Agreement must be at least 85% with a trainer. The inter-rater agreement in classrooms was

examined at the beginning of each semester of data collection. Any discrepancies were discussed and corrected.

The observers were blind to the experiment and were assigned to collect data in both experimental and control classrooms. Each teacher was observed by more than one observer. The scheduling of observers and the collection of data were controlled by the Associate Director of the Houston Center for Effective Teaching.

Each teacher and student teacher in the study were observed early in each semester during the same class period for three consecutive days. From the observations, a comprehensive profile of teachers' and students' behaviors was developed. Each teacher and student teacher compared their behaviors on these profiles with the national criterion established for effective teaching in multiple research studies linking instruction to achievement scores (Stallings, 1980; Stallings, 1986; Stallings, Cory, Fairweather, and Needels, M. 1978; Stallings, and Krasavage, 1986; Stallings, Needels, and Stayrook, 1979). Based upon an analysis of their profiles, teachers and student teachers set goals for improved classroom management, interactive instruction, and behavior management. At the end of the semester, participants were observed again and given a second profile of behavior. To evaluate their behavior change, teachers compared their first profile with the second to see if they had met their goals. A set of profiles is included in Attachment A.

Interviews

Interviews with the former student teachers examined their attitudes toward teaching and plans for the future. In interviews, principals were asked to compare the PDS first year teachers to other first year teachers. The interviews were conducted by two doctoral students and a college faculty member. The interviews were conducted in the Fall 1988 and Spring 1989. Interviews and questionnaires were also conducted with Academy School administrators and teachers to delineate expectations and change in attitudes.

Ethnographic Records

Records and reports of the weekly and monthly school/college council meetings were kept by the ethnographer. Reports from teachers and college faculty at these meetings provided formative evaluation for the program. Documentation of parent involvement and community relations was also kept.

Descriptive Statistics

Change in the organizational structure of the school, including the number of administrators, counselors, and teaching assignments, was reported. Student demographics and test scores were also a part of the descriptive data base.

Data Analysis

Observations captured on floppy discs in the laptop computers were merged on an IBM personal computer. Group means, standard deviations, and minimums and maximums were computed for the supervising teachers, experimental student teachers, and control student teachers at the beginning and end of each semester. To examine for significant change, t-tests were used to examine the difference in mean score change. The level of significance was set at .05 probability.

Inferential statistics were used to examine the difference in the experimental and control student teachers after their exit from the teacher preparation program.

RESULTS

To answer question one regarding the differences between experimental and control student teachers, observation data were analyzed. This data indicated that Experimental Student Teachers (ESTs) significantly changed their behavior on all instructional behavior variably tested (see the mean difference column on Table 1). Academic statements were increased by 10%. At the post observation, the ESts were as high as the nationally established criteria of 80% for using academic statements during the class period. The criteria were established for these variables in three national studies (Stallings, Fairweather and Needels, 1978; Stallings, Needels and Stayrook, 1979; and Stallings, 1986). All three levels of questions were significantly increased by the ESts, whereas the CSTs decreased their percent of questions asked. Especially impressive is the fact that ESTs met the national criteria of 3% on clarifying questions at the post observation. This indicates that the ESTs were checking to see if their students understood what was being taught before moving on to the next part of the lesson. The ESTs asked clarifying questions four times as often as did the CSTs (see the Mean Post column on Table 1).

Two variables addressing supportive feedback to student responses also increased significantly for the ESTs: these are praise/support and guided correction. Both of these variables met the national criteria at the post observation for the ESTs. Research on low achieving students indicates a need for frequent, clear, and positive acknowledgement or correction for student efforts. This feedback guides the students to succeed rather than fail. The control student teachers were higher than the

CHANGE IN EXPERIMENTAL, CONTROL STUDENT TEACHERS,' AND SUPERVISING TEACHERS' INSTRUCTIONAL BEHAVIOR

TABLE 1

Sample:
Experimental = 44
Control = 25
Supervising = 32

Variables	Min Pre %	Min Post %	Max Pre %	Max Post %	Mean Pre %	Mean Post %	Standard Dev Pre %	Standard Dev Post %	Mean Diff	SD Diff	t-score	Prob.
Students Off-Task												
Experimental S.T.	0	0	65	44	21.9	12.4	13.9	10.2	-9.5	10.9	4.8	.001 *
Control S.T.	0	1	22	31	11.1	10.8	5.6	6.5	- .3	8.1	.2	.84
Teachers	1	0	34	28	10.5	5.5	7.8	5.4	-5.0	4.9	4.7	.001 *
Academic Statements												
Experimental S.T.	45	49	87	94	71.7	81.0	8.9	9.2	+9.3	8.9	4.7	.001 *
Control S.T.	58	66	95	91	80.7	78.8	8.1	5.5	-1.9	7.8	1.2	.23
Teachers	49	68	97	97	79.3	85	11.1	7.8	+5.7	7.3	4.4	.000 *
Organizing Statements												
Experimental S.T.	1	2	49	35	23.6	14.5	9.4	6.3	-9.1	8.8	5.7	.001 *
Control S.T.	0	2	35	28	15.7	16.4	7.3	5.7	+ .7	7.7	.4	.66
Teachers	0	2	35	28	16.	11.6	8.6	6.7	-4.4	6.2	4.1	.000 *
Direct Questions												
Experimental S.T.	2	8	20	28	11.7	14.4	4.1	4.3	+2.7	3.5	4.3	.001 *
Control S.T.	10	6	21	20	14.8	13.3	3.1	3.4	-1.5	3.8	1.9	.60
Teachers	5	6	18	23	12.9	14.	3.1	3.9	+1.2	3.3	1.8	.07
Clarifying Questions												
Experimental S.T.	0	0	18	14	1.4	3.3	3.2	3.1	+1.9	4.7	2.2	.05 *
Control S.T.	0	0	6	3	1.6	.8	1.7	.9	- .8	1.3	2.9	.01 *
Teachers	0	0	5.8	11.6	1.2	3.	1.5	3.1	+1.8	2.2	3.3	.003 *
Higher Order Questions												
Experimental S.T.	0	0	6	2	.4	.9	1.2	.7	+ .5	1.1	2.6	.01 *
Control S.T.	0	0	1	4	.1	.4	.2	.7	+ .3	.8	1.8	.09
Teachers	0	0	1.9	5.3	.3	1.1	.5	1.4	+ .8	1.4	3.0	.005 *
Praise and Support												
Experimental S.T.	1	3	13	16	5.6	7.7	2.8	2.6	+2.1	2.6	4.5	.001 *
Control S.T.	4	2	10	13	6.5	5.9	1.9	2.4	- .6	2.0	1.5	.14
Teachers	2.2	1.7	11.6	14.4	7.1	8.3	3.0	2.7	+1.2	3.3	1.9	.07
Guided Correction												
Experimental S.T.	0	1	7	10	1.9	3.2	1.7	1.8	+1.3	1.3	5.8	.001 *
Control S.T.	0	0	6	5	2.2	1.6	1.5	1.2	- .6	-1.1	2.1	.05 *
Teachers	0	.2	5.3	11.5	2.3	3.4	1.3	2.2	+1.1	2.1	3.0	.005 *

* = Significant

ESTs at the beginning of the semester, but reached their use of positive feedback and guided corrections.

The organizational statements were reduced by 9.1 percent (p.>.001), indicating more efficient organizational procedures being used by the ESTs. At the post observation, the national criterion of 15% or less for management interactions was reduced by the EST's.

The Control Student Teachers (CSTs) did not significantly increase any variable. They did significantly decrease their clarifying questions and their guided corrective feedback (See Table 1).

Students in the classrooms of experimental student teachers (ESTs) significantly reduced off-task behavior. The average off-task rate for EST classrooms was 21.9% pre-observation, and 12.4% post observation. The students in the ESTs classrooms significantly reduced their off-task behavior by 9.5 percent ($p > .001$). The mean for off-task behavior at the beginning of the semester for students in CSTs classrooms was 11.1; thus, they did not have as much room to improve as did the ESTs. The CSTs were teaching in the suburbs where the students may have initially had better attending behavior and were less distracted from their academic work than were the at-risk students in the inner-city school. At pre-observation, the highest off-task rate for a CSTs' classroom was 22%, compared to 65%, the highest for an ESTs' classroom. The EST with the 65% off-task reduced her rate by 21%. All ESTs reduced their off-task rates, whereas 47% of the CST classrooms increased their off-task behavior by 1% to 11%. Nevertheless all ESTs were not successful. Regardless of the great efforts on the part of the supervising teacher and the college supervisor, one student teacher was not suited to the teaching profession and was counseled out of teaching. One other student teacher could not pass the Exam for the Certification of Educators in Texas.

The average of the CSTs remained approximately the same from pre to post observations on all variables. This argues that most CSTs entered student teaching with good student management skills and generally maintained their skills, whereas the ESTs went into a teaching environment where they had difficulty initially and improved significantly. This result is tied directly to the purpose of the program -- to help teachers learn to teach effectively in inner-city schools.

The second research question regarding supervising teachers' change was also addressed through the observation data. Teachers who supervised experimental student teachers and attended the weekly seminars improved their classroom instructional strategies as much as did teachers in other sites who were not in the role of supervising student teachers. Further, the teachers in this study performed above the national criteria on seven out of eight variables.

The supervising teachers significantly changed on six out of eight variables examined (see Table 1). Asking direct questions and providing praise did not change, but they were within the national

criteria range even at the pre-observation. At the post observation, they were equivalent to the national criterion on seven out of eight variables. Even the off-task rate was reduced significantly by 5 percent. The end of the semester record indicates that these inner-city elementary and middle school children were engaged in their academic tasks 95% of the observed time.

The third question regarding the modeling effect of supervising teachers on their student teachers was examined by comparing the rank order of supervising teachers and the rank order of student teachers on the percent of academic interactions used and students' off-task rates. Teachers' rank orders after the first observation matched nearly perfectly the ESTs' rank order at the second observation ($r = .84$). Teachers, for the most part, did not shift rank order from the beginning to the end of the semester, but the ESTs did. This suggests the student teachers did change their instructional strategies and behavior management in the direction of their teacher's behavior.

The fourth question regarding ESTs' choice to teach in inner city schools was examined through exit questionnaires, interviews, student teacher journals, and follow-up telephone interviews. In an exiting questionnaire given each semester, student teachers were asked if they would choose to teach in an inner-city school if offered the opportunity. Ninety percent indicated they would welcome such an assignment.

All of the student teachers who had graduated from the PDS were reached by phone for an interview during their first year of teaching. Many of these student teachers had stayed in contact with each other, with their supervising teacher and/or the college supervisor. There had been a real bonding among these people. The interview data indicated two were finishing Masters of Education course requirements; one returned to his profession as a geologist; one became a stockbroker; one is having a baby; one has her own day care business. The others are employed in the teaching profession; twenty four have been employed by the HISD, four of whom are teaching at the PDS; nine are employed in other multi-cultural low economic schools not located in the inner-city; five are working in middle to upper-class schools. In the phone interviews the following responses were given when asked what do you find most rewarding in teaching. "When I can get children who lack English skills to understand and start to verbalize." "Teaching children to read and seeing how proud they are." "Working with these children and making a difference." "Planning a day and having it go well." Some comments from those teaching in the suburbs included, "Having learned to teach in the PDS I can teach anywhere now and feel confident."

On the exiting questionnaires, ninety-three percent of the experimental student teachers gave high ratings to the school-based seminars also attended by college supervisors and supervising teachers. They especially liked the time allocated to small groups of student teachers for discussing common problems. They also liked the time spent with the group of supervising teachers which allowed them the opportunity to learn from more than one teacher. Having their college supervisor available on the school campus more of the time was also appreciated. At a recent professional

meeting, one former PDS student teacher, now teaching, expressed her appreciation for the management and instructional ideas presented in the seminars. She felt her appreciation had increased one hundred fold now that she was responsible for a classroom of children. As she reflected upon her experience at the PDS, she attributed the success she is having in her first teaching assignment to her sensitive supervising teacher, the observation profiles, the systematic feedback, and the many group problem solving activities provided in the seminars. A final impressive indicator of the program's success was the award won by a PDS student as the Texas Student Teacher of the Year.

The control student teachers were more difficult to reach by phone (66%). They did not have a network to help locate each other. They seemed to feel less affiliation with the COE since current addresses or phone numbers could not be located in university or alumna files. Of the 15 contacted, 11 are now involved in the teaching profession. Four are teaching in inner-city or multi-culture settings. All of the others are teaching in suburban areas.

To answer the fifth question regarding the success of PDS graduates during their first years of teaching, their principals were interviewed by phone. School principals were contacted regarding their PDS first year teacher. They were asked to compare other first year teachers hired during the past three years with the PDS prepared teacher. One principal hired four PDS graduates and gave all four higher rankings than other first year teachers. The principals' comments included: "Very sensitive and aware of the students needs." "Committed to doing a good job of teaching the neighborhood children." "Effective classroom management." "Committed to the goals of the school... to teach all children." Eleven principals gave the PDS graduates a five on a five point scale. Their comments included, "This is not an easy situation. There are many ESL students, yet Miss *X* is effective. She works well with other faculty and the students. She is eager to learn." Another principal said, "Mr. *H* is very dedicated to these children. He spends a lot of time planning lessons for this special population. He is learning fast. He came to us with very good management skills!" Four principals reported giving these first year teachers extra credit (EQs) on their Texas Teacher Assessment report.

Most other principals ranked their PDS graduates four on the five point scale. Their comments included: "Very positive." "Hard working." "The children like her." "Has the skill and patience to work with this type of student." "Well prepared." "Lots of ideas to make it fun." "Good management skills." "Very dedicated to being a good teacher."

Three principals ranked their PDS first year teachers a three on the five point scale, saying they were about the same as other first year teachers. One comment said, "Mr. *Y* has to work hard at becoming a teacher. This is his second career and he is learning a lot about middle school children." All principals said they would be happy to receive other PDS graduates.

Question number six regarding the PDS teachers' professional growth and choice for remaining at the PDS was examined through interviews, journals, and weekly evaluations of the seminars. The supervising teachers also echoed high praise for the seminars and a recognition for their own growth.

Teachers reported professional growth in several areas: eleven teachers have presented papers at national and regional conferences (e.g. ATE, AERA, PDK, and a regional mathematics conference); all teachers were enrolled in university courses offered at the school site which are leading to advanced degrees; and university courses in clinical supervision and observation have allowed the supervising teachers to take leadership in the seminars and conduct the laptop computer observations. Other indicators of teacher success include Midora Mitchell's being selected by the Walt Disney Company as one of the thirty-one teachers to be honored in the national Salute to the American Teacher. Another teacher, Ada Norman, was selected to participate in the Texas Agency Master Teacher Pilot Project.

When the school was reorganized in Spring 1988, all teachers were offered the opportunity to transfer to other schools. All of the teachers who had taken part in the PDS program chose to remain in the School.

Question number seven regarding the positive or negative effects of the PDS on the children in the school was examined by testing for differences in student off-task rates and comparing grade level achievement test scores from one year to the next. Some school officials worried that students' academic achievement would be negatively effected by having so many student teachers providing instruction. Clearly students' off-task rates were reduced, as reported in the text for question one of this section. At the end of the third year, scores on the Texas Education Assessment of Minimal Skills (TEAMS) for the middle school were higher than they had ever been at this school. The scores for the written section were low for the elementary school, as they were for most schools in the district that year. In the third and fifth grades in which the mathematics tutors were assigned, student scores on the math test were higher.

In Fall 1990, a new more difficult test, the Texas Assessment of Academic Skills (TAAS), was administered throughout Texas. The TAAS examines comprehension skills. Amazingly, the PDS students performed better than most other schools in the district and were above average for the state (See Table 2).

IMPLICATIONS AND CONCLUSIONS

The contribution this experiment makes to the knowledge base of teacher education is that groups of students can be prepared to teach successfully in inner-city schools when several conditions are present. The school environment must be safe and supportive. (The worst fears were not realized;

TEXAS ASSESSMENT ACADEMIC SKILLS (TAAS)

GREGORY LINCOLN PDS

FALL 1990	WRITING	READING	MATH
Third			
%	68%	80%	78%
Number	50	51	51
Fifth			
%	84%	71%	55%
Number	51	51	51
Seventh			
%	81%	60%	61%
Number	144	142	142

Note: Ranked 8th in City
First among those who did not have the Van Guard Program

Table 2

not one student teacher has been harmed or even threatened.) The school must have a principal and faculty committed to their own growth and to preparing new professionals for the field. The college faculty must be willing to collaborate with the school teachers in developing new approaches to teaching methods classes and collaborate in providing student teacher seminars at the school site.

There must be a window of at least three years to evaluate the impact on the PDS student teacher graduates and on the children in the school.

Another contribution this experiment offers is the use of the laptop computer methodology in evaluating the student teachers' and teachers' changes in classroom instructional strategies. The significant change identified in the experimental student teachers' and the supervising teachers' classroom instruction and their students' reduced off-task behavior we believe to be a direct result from the weekly triad seminars. The seminars promoted reflectivity and commitment to change in all participants.

The other major effect of the program is the fact that 80% of the student teachers trained at the PDS are successfully teaching multi-cultural at-risk children who are considered hard-to-teach children. At a recent superintendents' meeting, participants were asked, "What would you like for colleges of education to do differently in preparing teachers for your schools?" Each in their own way defined a need for teachers who could teach children from a variety of cultural backgrounds. Large and small districts have had an influx of immigrant children from South and Central America, as well as from the Pacific Basin. Writing in 1987 (p. 7), Hodgkinson says "83 percent of today's immigrants come from South America and Asia ... speaking some 300 languages and dialects. Their culture, backgrounds, arts, and values are all very different from those of Europe. Few public school teachers have the easy familiarity with these cultures. The terms Hispanic and Asian mask areas of great diversity within these groups." Hodgkinson predicts that by the year 2000, forty percent of the children in our schools will be from minority groups. Unfortunately, the American public school curriculum is based singularly on the European culture. The James Madison High School Curriculum, advocated by William Bennet, the former Secretary of Education, required American and European history and literature with no mention of Asia or South America. While teacher preparation programs may include a multi-culture course, the ideas are seldom integrated across the program. Clearly, models for preparing teachers to work knowledgeably and effectively with our diverse populations are needed. Colleges of Education in collaboration with public schools must restructure themselves to meet the needs of children in a global society. The PDS described here is a step in this direction.

Attachment A

Observation Profile of Betty Brown's Classroom

Observation Variables	Criterion	Criterion %	Class %	Goal
Teacher Involved In				
Monitoring Silent Reading	X	15	0	Monitoring: 35% or less.
Monitoring Written Work	X	20	33	
Reading Aloud	X	6	9	Interactive Instruction: 50% or more.
Instruction/Explanation	X	25	6	
Discussion/Review Assignments	X	10	0	
Practice Drill	X	4	0	
Taking Test/Quiz	X	5	4	
Cooperative Groups	X	10	0	
Classroom Management with Students	X	2	13	Organizing: 15% or less.
Making Assignments	X	10	10	
Working Alone	X	3	25	
Social Interaction with Students	X	0	0	
Providing Discipline	X	0	0	
Students Involved In				
Reading Silently	X	15	0	Seatwork: 35% or less.
Written Assignments	X	20	28	
Receiving Instruction/ Explanation	X	15	3	Interactive Instruction: 50% or more.
Reading Aloud	X	6	9	
Discussion/Review	X	10	0	
Practice Drill	X	4	0	
Taking Test/Quiz	X	5	10	
Cooperative Groups	X	10	0	
Classroom Management	X	5	3	Organizing: 15% or less.
Receiving Assignments	X	10	12	
Social Interaction	X	0	25	Off-task: 6% or less.
Student Uninvolved	X	0	10	
Being Disciplined	X	0	0	

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rofile of Interactions Variables

Interactions	Criterion						Criterion Percent	Teacher Baseline Pertcent
All Academic Statements	X						80	76
All Organizing or Managing Statements						X	15	20
All Behavior Statements				X			3	3
All Social Statements			X				2	1
Teacher Instructs/Explains		X					12	7
Teacher Asks Direct Questions or Commands						X	10	15
Teacher Asks Clarifying Questions			X				3	0
Teacher Asks Open-Ended Questions			X				3	3
Student Responds to Academic Questions				X			15	16
Student Shout-Outs				X			0	4
Student Doesn't Know Answer			X				1	0
Student Asks Academic Questions				X			2	3
Teacher Praises or Supports Academic Responses					X		6	8
Praise for Behavior							*	11
Teacher Corrects						X	6	10
Teacher Corrects with Guidance						X	4	9
Correcting Behavior							*	2
Teacher Monitoring Academic Work		X					10	4
Teacher Movement			X				5	2
Teacher Working Alone			X				2	1
Outside Intrusions					X		0	2
Group Discussion	X						4	0
Brainstorming	X						2	0

* Criterion has not been established.